

Interpreting Bit information from *rcc info* macro

```
>run_info 6024026
Run information for run 6024026
+-----+
| TIER1_name |
+-----+
| trg_050111.bin |
+-----+
+-----+-----+-----+-----+-----+
| name          | triggerIndex | offlineTriggerID | prescale      | numberOfEvents |
+-----+-----+-----+-----+-----+
| bemchttest    | 0            | 1                | 1.00000000    | 3316           |
| cu-zdc-narrow | 2            | 3                | 53.00000000   | 686            |
+-----+-----+-----+-----+-----+
+-----+-----+-----+-----+-----+
| name          | idx_trigger  | bin(pwc.onbits)  | bin(pwc.offbits) |
+-----+-----+-----+-----+-----+
| bemchttest    | 0            | 101001101000    | 1000000000000000 |
| cu-zdc-narrow | 2            | 1001101000      | 1000000000000000 |
+-----+-----+-----+-----+-----+
```

Consult TRG sub-system page and select Run2005 and make a copy of **TCU_Input_Bits_run2005.pdf**. This contains 4 columns of TCU bit patterns reading from bit 0 (LS bit) to bit 15 (MS bit) for different data taking runs.

The table from the *run_info* macro, pwc (Physics Word), contains the TCU bit pattern for that trigger. Note that the bits must be read from right (LS) to left (MS) to map onto the TCU bit patterns 0 to 15.

Thus, for the cu-zdc-narrow trigger which has pwc 1001101000 this corresponds to (reading from right to left) TCU bits: 3,5,6,9 which are, from the TCU_Input_Bits table:

- 3: ZDC TAC Diff in Window
- 5: ZDC East ADC > th0 AND ZDC West ADC > th0
- 6: ZDC East TAC in Window AND ZDC West TAC in Window
- 9: Blue + Yellow bunches filled